

what zigzag, angled, stout, villose-pubescent, glandless; prickles not numerous, small, stout, and hooked. Leaves trifoliolate, the upper unifoliolate, thickish, of moderate size or small, coarsely dentate, very velvety on the lower surface and nearly smooth above; leaflets broad; unifoliolate leaves very broad and often slightly incised or deeply 2-incised. Inflorescence on a short axis, cymose or cymose-corymbose; pedicels very pubescent, with rarely a few stalked glands, 4 to 8 set at a small angle or erect, and an erect one from the axil of each lower leaf, those composing the cyme subtended by broad unifoliolate leaves or some without subtending leaves. Flowers not seen. Fruit ripening before the middle of July, nearly globose, about 0.5 inch in diameter. Very productive, flavor fine. Ripe two weeks earlier than *R. Andrewsianus*.

This is a very abundant plant in the neighborhood of Philadelphia and Lancaster, Pennsylvania, and quite as abundant around Washington, D. C.

This species is closely related to *R. frondosus* Bigelow and needs careful study. It is evidently wide-spread. There was no specimen of it in the National Herbarium at Washington. There was, however, one specimen at the Academy of Sciences of Philadelphia, collected recently by Dr. Ida A. Keller.

WESTMINSTER, VERMONT.

MELANOSPORA PARASITICA

BY GUY WEST WILSON

This interesting species was collected in fair abundance in the vicinity of Van Cortlandt Park, New York City, the present season on *Isaria farinosa* (Dicks.) Fries, the conidial stage of *Cordyceps militaris* (L.) Sacc. Saccardo's *Sylloge Fungorum* contains the descriptions of two species of ascomycetous fungi which occur upon this host. A comparison of the descriptions led to the discovery that the characters given are insufficient to warrant the separation of these species. The first mention of this fungus is by L. Tulasne who described it as *Sphaeronema parasitica** on *Isaria crassa* from France. A few years later the brothers

* Ann. Sci. Nat. IV. 8: 40, note 2. 1857.

Tulasne transferred the species to the genus *Melanospora* and published a complete series of figures.* The next record of the occurrence of this fungus is by Plowright † who records it upon *Isaria farinosa* in England. He redescribes and refigures the species. Aside from the arrangement of the spores in the ascus the two accounts are essentially the same. Saccardo ‡ questions the correctness of this disposition of species and suggests that it probably belongs to *Ceratostoma* on account of its light-colored perithecium.

The first mention of the species from America is by Ellis and Everhart § who described it as *Ceratostoma biparasiticum* from material sent from Ohio by C. G. Lloyd. The material collected this season agrees with the description and the type specimen of the American species and equally well with the description of the European. The only points of difference are such as would be expected from two observers working on two continents independently of each other. The European species is described as having hyphae about 3.5μ in diameter, spores $5-6 \mu \times 2.5 \mu$ and perithecia about 200μ in diameter with a beak about $40-50 \mu \times 1000-2000 \mu$ while the American species has hyphae about 3μ , spores $6-7 \mu \times 1.5 \mu$ and perithecia $80-100 \mu$ with a beak $30-40 \mu \times 1000 \mu$. The brothers Tulasne had abundant material from which to describe their species as they not only collected it in its native haunts but cultivated it in the laboratory, while the type in the Ellis herbarium consists of a single plant of *Isaria* parasitized only at the base and containing at most a small number of perithecia. In a series of some half dozen or more infested plants of *Isaria* it is not difficult to find all regions of the host parasitized and perithecia with a considerable range in size. The American material is somewhat smaller than the European but otherwise the same. The perithecia are usually intermediate in diameter between the measurements given in the two descriptions and range from 1000 to 1500μ in height.

* Sel. Carp. Fung. 3: 10. pl. 3. f. 11-14. 1865.

† Grevillea 10: 71. pl. 158. f. 3. 1881.

‡ Syll. Fung. 2: 464. 1883.

§ Bull. Torrey Club 24: 127. 1897.

The problem of specific identity is by no means so complicated as that of generic relationship. That our fungus is not a *Sphaeronema* is evident from its production of ascospores, but its place in the one or the other of the two remaining genera to which it has been referred is not so easily decided, as they are very similar even though they belong to supposedly very different orders. In each case the perithecium is flask-shaped with a very long beak, rather light in color although appearing quite black to the naked eye. In *Melanospora* the perithecia are isolated, with a cottony stroma, which is sometimes wanting or poorly developed, and have the ostiolum surrounded by a fringe of hairs. In *Ceratostoma* the perithecia are also isolated, the stroma and fringed ostiolum are absent and paraphyses are usually present. The spores and asci are similar in both genera. In hope of assistance from a comparison of the material at hand with the types of the genera in question their history was traced. The genus *Ceratostoma* was founded by Fries on *Ceratosperrum* Mich., which had *C. nigrum* Mich. (= *Ceratostoma podioides* Fries) as the type*. This species has hyaline spores and is now known as *Valsa ceratophora* Tul. It is therefore evident that if our species is a member of the genus *Ceratostoma* as at present accepted it does not belong to the Friesian genus of that name. A further search shows that unless the species now assigned to that genus belong to *Ceratostomella* Sacc., from which they are distinguished only in spore-color the genus is without a name. The genus *Melanospora* was founded by Corda * with *M. Zamiae* as its type. With this species the one in question is undoubtedly congeneric. The synonymy of the species is as follows :

MELANOSPORA PARASITICA L. Tul. & C. Tul. Sel. Fung. Carpol. 3 : 10. 1865.

Sphaeronema parasitica L. Tul. Ann. Sci. Nat. IV. 8 : 40, note 2. 1857.

Ceratostoma biparasiticum Ellis & Everh. Bull. Torrey Club 24 : 127. 1897.

* Obs. Myc. 2 : 337. 1818.

† Icones. Fung. 1 : 24 pl. 7. f. 297 A. 1837.